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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,456	01/16/2002	Khoi A. Phan	G0244	6520

7590

05/06/2003

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,456

Applicant(s)

PHAN ET AL.

Examiner

Rodney E Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

In response to applicant's Amendment, dated February 29, 2003, the examiner acknowledges the correction of the claim objections set forth in the Office Action mailed November 29, 2002.

Regarding the 35 U.S.C. 102(b) rejection of claims 1-25 as being anticipated by Good, et al. (US 4,943,827), the applicant amended the claims to include the limitation wherein "the control system being proactively operative to control the exposing source based on the temperature information." (Emphasis added) The applicant argues that in Good "the contents of the memory 66 are predetermined for the range of temperature and humidity values expected in the environment in which the system will operate." (citing col. 8, lines 50-52) (Emphasis added) The applicant argues that this means that "Good can only react to a given temperature."

Further the applicant amended the claims to read: "a temperature sensor operative to proximally sense temperature characteristics of the substrate, including during an exposure cycle." (Emphasis added) The applicant argues that "Good monitors ambient air temperature prior to exposure to control exposure times."

However, Good discloses in column 8, lines 53-56 that: "All values contained within the tables of memory 66 may be determined empirically through experiments, or key values may be determined experimentally with remaining values being extrapolated." Further, in column 7, lines 49-54, Good discloses that "sensors should be positioned... to give an accurate information as possible regarding the temperature... during exposure." (Emphasis added) Thus, the examiner

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has considered the applicant's arguments in light of the amended claims and maintains the rejection.

Regarding the 35 U.S.C. 102(b) rejection of claims 1-25 as being anticipated by Mori, et al. (US 5,610,965), the applicant makes the argument that "Mori can only control by reacting to a given predetermined temperature" and that "Mori only monitors temperature of an adjacent structure at a fixed point location," and thus "Mori actually senses the stage temperature rather than the substrate itself." However, Mori states (abstract) that "the temperature of the mask and/or the wafer is detected." Furthermore Mori states (column 3, lines 44-50) "the temperatures monitored by the temperature sensors... during the exposure operation...". Thus, the examiner has considered the applicant's arguments in light of the amended claims and maintains the rejection.

Regarding the 35 U.S.C. 102(b) rejection of claims 1-25 as being anticipated by Miyai, et al. (US 5,581,324), the applicant makes the argument that Miyai's "control system is used to refocus a projection system to compensate for thermal distortions." The examiner has considered the applicant's arguments in light of the amended claims and withdraws the rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Good, et al. (US 4,943,827).

Good (US 4,943,827) discloses all the structure set forth in the claims. Regarding independent claims 1, 12, 17 and 23, Good (US 4,943,827) discloses "...an exposing source (Fig. 2, ref.# 22) operative to expose a substrate (Fig. 2, ref.# 10); a temperature sensor (Fig. 2, ref.# 50) operative to proximally sense temperature characteristics of the substrate, including during an exposure cycle; and a control system (Fig. 2, ref.# 54) operative to receive temperature information indicative of the temperature characteristics sensed by the temperature sensor, the control system being proactively operative to control the exposing source based on the temperature information (column 2, lines 41-46)."

Regarding the dependent claims, Good (US 4,943,827) likewise discloses all the structure set forth in the claims.

3. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori, et al. (US 5,610,965)

Mori (US 5,610,965) discloses all the structure set forth in the claims. Regarding independent claims 1, 12, 17 and 23, Mori (US 5,610,965) discloses "...an exposing source (Fig. 1, ref.# 7) operative to expose a substrate (Fig. 1, ref.# 1); a temperature sensor (Fig. 1, ref.# 5) operative to proximally sense temperature characteristics of the substrate, including during an exposure cycle; and a control system (Fig. 1, ref.# 11) operative to receive temperature information indicative of the temperature characteristics sensed by the temperature sensor, the control system being proactively operative to control the exposing source based on the temperature information (column 4, lines 30-46)."

Regarding the dependent claims, Mori (US 5,610,965) likewise discloses all the structure set forth in the claims.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name of the examiner.

May 2, 2003